

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SPECTACLE POND	Lake Area (ha):	17.81
Town: CROYDON	Maximum depth (m):	7.6
County: Sullivan	Mean depth (m):	2.9
River Basin: Connecticut	Volume (m ³):	512000
Latitude: 43°26'30" N	Relative depth:	1.6
Longitude: 72°09'20" W	Shore configuration:	1.74
Elevation (ft): 878	Areal water load (m/yr):	388.2
Shore length (m): 2600	Flushing rate (yr ⁻¹):	135.0
Watershed area (ha): 17014.2	P retention coeff.:	0.01
% watershed ponded: 1.8	Lake type:	natural

BIOLOGICAL:

	9 January 1990	16 August 1989
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	SPARSE - NO DOMINANTS
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		500.0
CHLOROPHYLL-A (µg/L)		3.68
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 68%	KELLICOTTIA 25%
#2	GASTROPUS 32%	NAUPLIUS LARVA 21%
#3		
ROTIFERS/LITER	22	59
MICROCRUSTACEA/LITER	0	81
ZOOPLANKTON ABUNDANCE (#/L)	22	140
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		3.1
BOTTOM DISSOLVED OXYGEN (mg/L)	5.0	0.6
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		60
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): 2.4
Hypolimnion volume (m³): None

CHEMICAL:

Lake: SPECTACLE POND

Town: CROYDON

	9 January 1990		16 August 1989		
DEPTH (m)	2.5	5.0	1.0	4.0	6.0
pH (units)	6.7	6.6	6.8	6.6	6.6
A.N.C. (Alkalinity)	9.7	9.8	9.2	9.1	10.9
NITRATE NITROGEN	0.13	0.18	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.26	0.26	0.32	0.32	0.47
TOTAL PHOSPHORUS	0.008	0.011	0.016	0.016	0.018
CONDUCTIVITY (μ mhos/cm)	92.9	93.4	76.6	79.3	82.7
APPARENT COLOR (cpu)	23	23	55	55	80
MAGNESIUM			0.71		
CALCIUM			5.0		
SODIUM			9.0		
POTASSIUM			0.70		
CHLORIDE	15	15	12		13
SULFATE	6	6	5		4
TN : TP	49	40	20		26
CALCITE SATURATION INDEX			2.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1989

D.O. S.D. PLANT CHL TOTAL CLASS

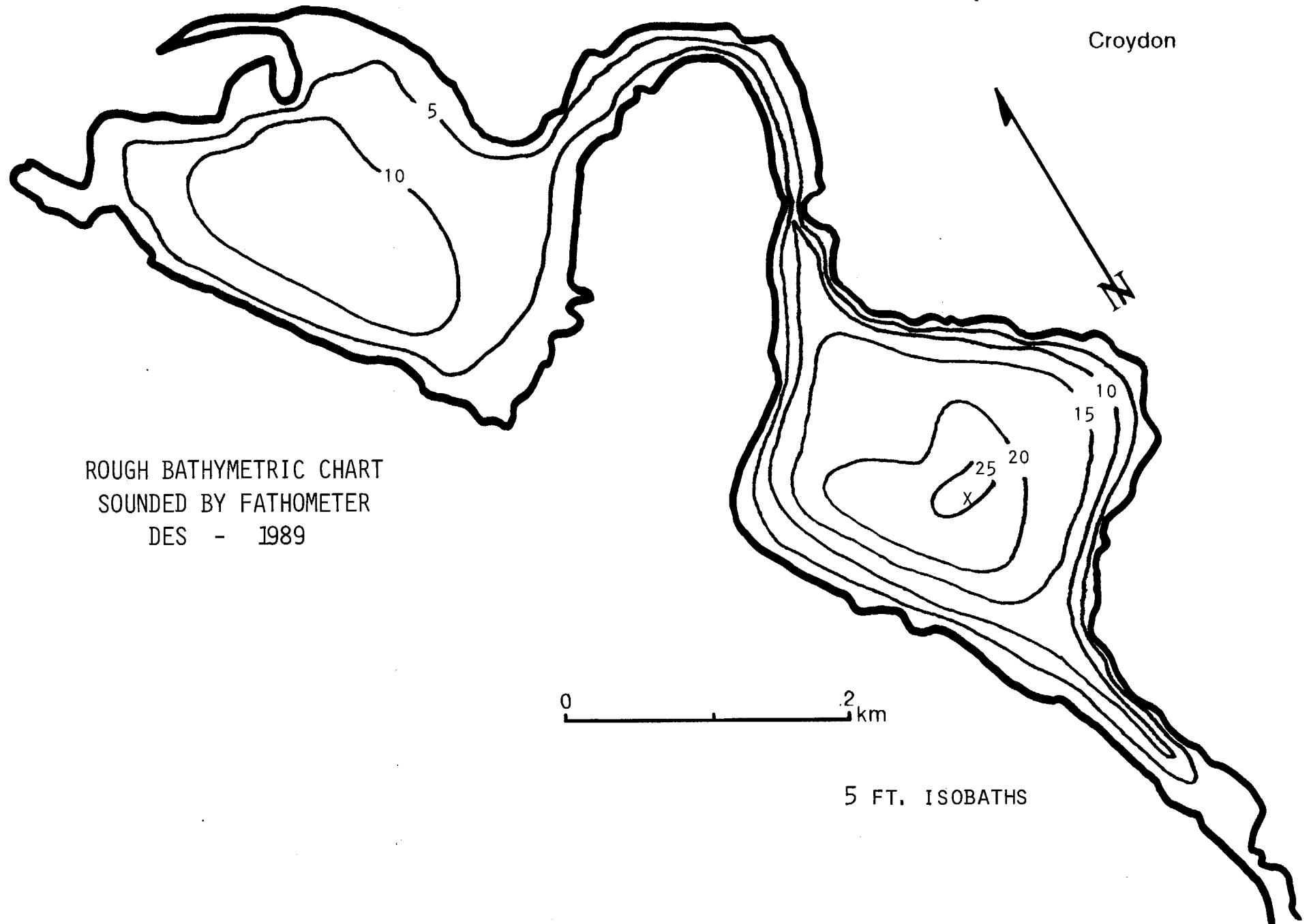
**	2	3	0	5	Meso.
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COMMENTS:

1. This pond is a natural wide area in the river (the North Branch of the Sugar River). It is shaped like a pair of eye-glasses (spectacles). A substantial current flows through the pond.
2. One house was located near the pond.
3. No obvious public access to the pond; we launched a boat from Route 10.
4. Dominant genera of whole-water phytoplankton were Cryptomonas (35%), tiny flagellates (20%) and Chroomonas (15%).

Spectacle Pond

Croydon



ROUGH BATHYMETRIC CHART
SOUNDED BY FATHOMETER
DES - 1989

111-256

FIELD DATA SHEET

LAKE: SPECTACLE POND	TOWN: CROYDON
DATE: 08/16/89	WEATHER: MOSTLY SUNNY; FEW HIGH CLOUDS

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BOTTOM DEPTH (m): 7.4
TIME: 1210

*Dissolved oxygen values are in mg/L
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WETLAND

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111-258

AQUATIC PLANT SURVEY

LAKE: SPECTACLE POND

TOWN: CROYDON

DATE: 08/16/89

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerselweed	Common
Y	Nuphar	Yellow water lily	Common
d	Dulichium arundinaceum	Three-way sedge	Sparse
S	Sparganium	Bur reed	Common
H	Equisetum	Horsetail	Scattered
W	Potamogeton	Pondweed	Common
X	Proserpinaca	Mermaid weed	Scattered
N	Nymphaea	White water lily	Scattered
G	Gramineae	Grass family	Scattered
O	Cephalanthus occidentalis	Buttonbush	Scattered
B	Brasenia schreberi	Water shield	Common
C	Ceratophyllum demersum	Coontail	Scattered
A	Sagittaria	Arrowhead	Sparse
T	Typha	Cattail	Sparse
b	Scirpus	Bulrush	Sparse
U	Utricularia	Bladderwort	Scattered
J	Juncus	Rush	Sparse
Z	Polygonum	Smartweed	Sparse
Q	Lobelia cardinalis	Cardinal flower	Sparse
L	Chamaedaphne calyculata	Leatherleaf	Scattered

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Although not depicted on the map, bottom growth was common, particularly in the narrow restriction area.
2. Much of the pond was surrounded by wetlands.
3. Freshwater mussels and turtles were observed. A bryozoan was also found.